

REMARKS

Claims 1-22 are currently pending, of which claims 1, 13, and 21 are independent. The Examiner stated that Applicant's arguments in the previous Office Action response, with respect to claims 1-22, were considered but are moot in view of the new ground(s) of rejection. In the Office Action, the Examiner rejected claims 1-22 under 35 U.S.C. § 103(a) as being unpatentable over the Admitted Prior Art (APA) in view of EP '761 and DE '220.

Specifically, the Examiner acknowledged that "[t]he APA tight-buffered optical fiber discussed in the background of the present invention and shown in Figure 2 of the drawing lacks a plurality of strength members embedded in the first buffer layer 106[. Rather,] the strength members are shown as surrounding the first buffer layer." The Examiner, however, asserted that EP '761 discloses optical fiber 1 provided with a buffer layer 14, which is embedded with strength members 13 (See Figure 5). The Examiner also asserted that "DE '220 discloses buffer layer 9 provided with a buffer layer 9 which is embedded with strength members 11."

Based on the foregoing assertions, the Examiner stated that it would have been obvious for one of ordinary skill in the art to also arrange or provide strength members embedded in the first buffer layer 106 of the APA in view the teachings of EP '176 and DE '220. The Examiner also concluded that this feature would have been a matter of obvious design and location of parts for providing a more compact fiber and better retention of the strength members to the fiber, since the strength members are embedded in the buffer layer. Applicant respectfully disagrees with the Examiner's assessment of these references and traverses these rejections.

Applicant respectfully submits that claims 1 and 21, as amended, provide a recitation including, for example, a tight-buffered optical fiber including "a plurality of strength members embedded in said first buffer layer, said plurality of strength members positioned longitudinally and in contact with said optical fiber and positioned to surround a circumference of said optical fiber." Applicant respectfully submits that EP '761 and DE '220 do not teach or suggest such features.

In contrast to the present invention, EP '761 discloses that "optical fibers 15 are aligned such that the areas of the covering layers 14 in which no tension members 18 is provided are placed adjacently, i.e., the long sides of the covering layers 14 are brought into contact with each other. According to such arrangement, the tension members 18 in the optical fiber cord 15 are placed only on [] both upper and lower surface sides of the ribbon cord 17 in Fig. 5." Therefore, EP '761 does not teach or suggest that the tension members are positioned so that they are in contact with the optical fibers (See Fig. 5) or that the tension members in the cover layers 14 are positioned to surround the circumference of the optical fibers.

DE '220 "relates to an optical element with a plurality of optical fibers and/or an optical cable with at least one optical element having a plurality of optical fibers and a sheath." (DE '220 Translation, page 1, lines 1-3) The figure of DE '220 illustrates an optical cable, having an optical element 3 surrounded by a metal sheathing 5. The optical element 3 itself has a plurality of optical fibers 7. (See DE '220 Translation, page 3, lines 6-10) "[T]o protect the optical fibers 7, for example, two elements 11 that have tensile strength and resistance to crushing and are made of a plastic with high tensile strength such as Kevlar or Aramid are embedded in the protective body 9. The elastic

material of the strand-like protective body 9 in the exemplary embodiment presented here fills up the hollow spaces formed by the corrugations beneath the corrugated metal sheathing 5 and ensures a good longitudinal water tightness of the optical cable 1 without having to provide any additional filling compounds and/or windings." (DE '220 Translation, page 3, lines 23-30)

In similar fashion to EP '761, DE '220 does not teach or suggest that elements 11 are positioned in contact with the optical fibers (See Figure) or that elements 11 are positioned in the protective body 9 to surround the circumference of the optical fibers. Furthermore, in contrast to the invention of claims 1 and 21, DE' 220 is directed to creating an optical cable with an optical element 3 having a plurality of optical fibers. The protective layer 9 (referred to as the buffer layer by the Examiner) is used to fill up the space formed by the corrugations beneath the corrugated metal sheathing 5. The protective layer 9 is not "a first buffer layer of a polymer material enclosing said optical fiber."

Accordingly, the combination of EP '761, DE' 220, and the APA would produce an optical cable including an optical element with tight buffered fibers. The tight buffered fibers would have tension members in the upper and lower sides of the covering layer of the optical fiber and tension members surrounding the covering layer. The spacing between the tight buffered fibers and the metal sheathing would be filled with a protective layer, such as protective layer 9 of DE '220. This combination would not produce a tight buffered optical fiber comprising: an optical fiber; at least a first buffer layer of a polymer material enclosing said optical fiber; a plurality of strength members embedded in said first buffer layer, said plurality of strength members

positioned longitudinally and in contact with said optical fiber and positioned to surround a circumference of said optical fiber, as recited in claims 1 and 21. Consequently, independent claims 1 and 21 are patentable over the cited references.

As part of the rejections discussed above, the Examiner asserted that it would have been obvious for one of ordinary skill in the art to also arrange or provide strength members embedded in the first buffer layer 106 of the APA in view of the teachings of EP '761 and DE '220. The Examiner further asserted that "[t]his feature would also seem to be a matter of obvious design and location of parts for providing a more compact fiber [with] better retention of the strength members to the fiber since they are embedded in the buffer layer itself." Applicant respectfully disagrees.

The MPEP states that "[t]he prior art must provide a motivation or reason for the worker in the art, without the benefit of [applicant's] specification, to make the necessary change in the reference device." (MPEP § 2144.04) The Examiner has not provided such a motivation in any of the cited references. Therefore, Applicant respectfully submits that such a basis for a rejection is improper.

With respect to claims 2-12 and 22, Applicant respectfully submits that these claims are allowable, at least for the same reasons as claims 1 and 21 and by virtue of their dependency on claims 1 and 21.

In view of the foregoing amendments and arguments, Applicant respectfully requests the withdrawal of the 35 U.S.C. § 103 (a) rejection of claims 1-12 and 21-22.

With respect to claim 13, Applicant respectfully submits that claim 13 is allowable, at least, because it recites a process for making the tight-buffered optical fiber of claim 1. The process of claim 13 creates a tight-buffered optical fiber including

"a plurality of strength members embedded in said first buffer layer, said plurality of strength members positioned longitudinally and in contact with said optical fiber and positioned to surround a circumference of said optical fiber." It follows from the construction of the tight-buffered optical fibers disclosed by the APA, in view of the teachings of EP '761 and DE '220, that the process of claim 13 would not have been obvious from the process for creating such tight-buffered optical fibers.

With respect to claims 14-20, Applicant respectfully submits that these claims are allowable, at least for the same reasons as claim 13 and by virtue of their dependency on claim 13.

In view of the foregoing amendments and arguments, Applicant respectfully requests the withdrawal of the 35 U.S.C. § 103 (a) rejection of claims 13-20.

In view of the foregoing amendments and remarks, Applicant respectfully requests reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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By: 

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